



POWER CONTROLLER COMPARISONS

Initial Cost	3 Year Cost *	Control Life	Heater Life	EMI Generation	Control	Response Rate	Options	Comments
Electromechanical Relay And Contactor								
Low for low current	Highest	Limited (elec. & mech.)	Shortest	Yes, coil and contacts	Poor	Slowest	None	To extend relay life the increase cycle time to 30 seconds or more
Mercury Displacement Relay (MDR)								
Low	Medium	High	Adequate	Yes, coil and contact	Fair to good	Medium to fast	None	Silent Operation. Mercury may not be desirable. Minimum cycle time is two seconds. Position sensitive.
Solid State Relay (SSR)								
Medium	Medium	Extended	Extended	Minimal with burst fire	Good	Fast	None	Excellent control with 1 second cycle time. Requires heatsink.
SCR Solid State Contactor								
Medium	Low	Extended	Extended	Minimal	Good	Fast	None	Excellent control with 1 second cycle time.
SCR Burst Firing								
High	Low	Extended	Longest	Minimal	Excellent	Fastest	None	Fastest variable time base unit.
SCR Phase Angle Firing								
High	Lowest	Extended	Longest	High	Excellent	Fastest	Current Limit	Required for tungsten elements, transformers, or for current limiting.

*Includes heater replacement and lost production.